	No	sensing / control	bandwidth	bits	Chassis #	ADC/DAC #	Comments	Variable (Beckhoff)	Variable (EPICS)
A1 / PSL EPICS control									
A1.1 pre modecleaner PMC									
DB9 Connector 1 (In1)									
	1			1	2	DAC_2_0			
sw2	1		NA	1	2	DAC_2_1	enables summation of TEST2 input		{ifo}:PSL-PMC_TF_IN_ON
Enable locking (lock on)	1		NA	1	2	DAC_2_2	turns lock automation on		{ifo}:PSL-PMC_LOCK_ON
Ramp on/off (ramp on)	1		NA	1	2	DAC_2_3	turns ramp on		{ifo}:PSL-PMC_RAMP_ON
DB9 Connector 2 (In3)									
Set gain	1		NA	16	2	DAC_2_8	set gain of control loop		{ifo}:PSL-PMC_GAIN
Set power threshold (ref)	1		NA	16	2	DAC_2_9	sets threshold which lock acquisition automation assumes PMC is locked		{ifo}:PSL-PMC_REF
Set error point offset (in offset)	1		NA	16	2	DAC_2_10	correction of electronic offset in control loop		{ifo}:PSL-PMC_INOFFSET
heater			NA		2	DAC_2_11	set offset of heater and hence operation point of PMC temp. loop		{ifo}:PSL-PMC_HEATER
DB9 Connector 3 (In2)									
blancking	1		NA	16	2	DAC_2_4	opens feedback loop		{ifo}:PSL-PMC_BLANKING
gain boost	1		NA	16	2	DAC_2_5	activates integrator in control loop		{ifo}:PSL-PMC_BOOST
calibration line in (Tfin)	1		NA	16	2	DAC_2_6	summation point for calibration lines, used for alignment ramp		{ifo}:PSL-PMC_TF_IN
ramp			NA		2	DAC_2_7	not used (would be ramp input in case digital lock acquisition is used)		{ifo}:PSL-PMC_RAMP
Lemo 00									
PTZ voltage monitor	1			16	2				
Lemo 00 (prelim)									
Relock counter	1			1	2				
DB9 Connector 4 (Out 2)									
HV monitor	1			1	2	ADC_2_4	monitor of HV signal send to PZT actuator of PMC		{ifo}:PSL-PMC_HV_MON
Mixer out monitor	1			1	2	ADC_2_5	error signal of control loop		{ifo}:PSL-PMC_MIXER
Local oscillator power (LODET)	1			1	2	ADC_2_6	power of local oscillator used in demodulation electronic		{ifo}:PSL-PMC_LO_POWER_MON
"resonant" trigger (TRIGGER)	1			1	2	ADC_2_7	DC signal of locking diode, used by autolock to dertermine if PMC is resonant		{ifo}:PSL-PMC_TRIGGER
DB9 Connector 5 (Out1)									
TF B	1			16	2	ADC_2_0	test point for transfer function measurement		{ifo}:PSL-PMC_TF_B
Temp	1			16	2	ADC_2_1	temperature sensor on PMC		{ifo}:PSL-PMC_TEMP
TF A	1			16	2	ADC_2_2	test point for transferfunction measurement		{ifo}:PSL-PMC_TF_A
Resonant	1				2	ADC_2_3	binary signals, 1 if auto lock thinks PMC is resonant		{ifo}:PSL-PMC_RESONANT_MON
A1.2 intensity stabilization ISS									
DB9 Connector 1 (Out3)									
AOM	1			16	1	ADC_0_8	ISS actuator signal send to AOM		{ifo}:PSL-ISS_AOM
QPD dX	1			16	1	ADC_0_9	quadrant photodiode dx signal		{ifo}:PSL-ISS_QPDDX
QPD dY	1			16	1	ADC_0_10	quadrant photodiode dy signal		{ifo}:PSL-ISS_QPDDY
DB9 Connector 2 (In1)									
reference signal	1			16	1	DAC_0_0	reference to which the ISS stabilizes the power		{ifo}:PSL-ISS_REFSIGNAL
transfer 1 in	1			16	1	DAC_0_1	summation into error point		{ifo}:PSL-ISS_TRANSFER1_INJ
transfer 2 in	1			16	1	DAC_0_2	summation into outer-loop signal		{ifo}:PSL-ISS_TRANSFER2_INJ
set gain	1			16	1	DAC_0_3	ISS control loop gain		{ifo}:PSL-ISS_GAIN
DB9 Connector 3 (In2)									
AOM offset	1			16	1	DAC_0_4	offset added to control signal to enable AOM to increase power		{ifo}:PSL-ISS_CTRL_OFFSET
interchange of photodiodes	1			16	1	DAC_0_5	selects if photodiode A of B is used as in-loop sensor		{ifo}:PSL-ISS_INLOOP_PD_SELECT
close outer loop	1			16	1	DAC_0_6	switch to open/close second ISS feedback loop		{ifo}:PSL-ISS_SECONDLOOP_CLOSED
close feedback control loop	1			16	1	DAC_0_7	switch to open/close feedback loop		{ifo}:PSL-ISS_LOOP_STATE
DB9 Connector 4 (Out1)									
PD A monitor	1			16	1	ADC_0_0	monitor signal of photodiode A, (at output of signal conditioning filter)		{ifo}:PSL-ISS_PDAMON
PD B monitor	1			16	1	ADC_0_1	monitor signal of photodiode B, (at output of signal conditioning filter)		{ifo}:PSL-ISS_PDBMON
Outer PD monitor	1			16	1	ADC_0_2	monitor signal of second loop photodiode		{ifo}:PSL-ISS_OUTERPDMON
reference signal out	1			16	1	ADC_0_3	low pass filtered readback of ref. signal		{ifo}:PSL-ISS_REFSIGNALOUT
DB9 Connector 5 (Out2)									
transfer 1A	1			16	1	ADC_0_4	signal infront of summation point in first loop		{ifo}:PSL-ISS_TRANSFER1A
transfer 1B	1			16	1	ADC_0_5	signal behind summation point in first loop		{ifo}:PSL-ISS_TRANSFER1B
transfer 2A	1			16	1	ADC_0_6	signal infront of summation point in second loop		{ifo}:PSL-ISS_TRANSFER2A
transfer 2B	1			16	1	ADC_0_7	signal behind summation point in second loop		{ifo}:PSL-ISS_TRANSFER2B
A.1.2.1 second loop whitening									
DB9 Connector 1 (Out1)									
PD1	1			16	floor	ADC_0_20			{ifo}:PSL-ISS_SECONDLOOP_PD1
PD2	1			16	floor	ADC_0_21			{ifo}:PSL-ISS_SECONDLOOP_PD2
PD3	1			16	floor	ADC_0_22			{ifo}:PSL-ISS_SECONDLOOP_PD3
PD4	1			16	floor	ADC_0_23			{ifo}:PSL-ISS_SECONDLOOP_PD4
DB9 Connector 2 (Out2)									
PD5	1			16	floor	ADC_0_24			{ifo}:PSL-ISS_SECONDLOOP_PD5
PD6	1			16	floor	ADC_0_25			{ifo}:PSL-ISS_SECONDLOOP_PD6
PD7	1			16	floor	ADC_0_26			{ifo}:PSL-ISS_SECONDLOOP_PD7
PD8	1			16	floor	ADC_0_27			{ifo}:PSL-ISS_SECONDLOOP_PD8
A.1.2.2 second loop QPD									
DB9 Connector 1 (Out1)									
SEG1	1			16	ISC	ADC_0_16	PD array QPD Segment 1		{ifo}:PSL-ISS_SECONDLOOP_QPD_SEG1
SEG2	1			16	ISC	ADC_0_17	PD array QPD Segment 2		{ifo}:PSL-ISS_SECONDLOOP_QPD_SEG2
SEG3	1			16	ISC	ADC_0_18	PD array QPD Segment 3		{ifo}:PSL-ISS_SECONDLOOP_QPD_SEG3
SEG4	1			16	ISC	ADC_0_19	PD array QPD Segment 4		{ifo}:PSL-ISS_SECONDLOOP_QPD_SEG4
A.1.2.3 second loop servo									
DB9 Connector 1 (Out1)									
PD 5-8 SUM	1			16	2	ADC_0_12	sum of PDs 5-8		{ifo}:PSL-ISS_SECONDLOOP_PD_58_SUM
ref signal mon	1			16	2	ADC_0_13	reference voltage readback		{ifo}:PSL-ISS_SECONDLOOP_REFSIGNAL_MON
spare	1			16	2	ADC_0_14			
PD 1-4 SUM	1			16	2	ADC_0_15	sum of PDs 1-4		{ifo}:PSL-ISS_SECONDLOOP_PD_14_SUM
DB9 Connector 2 (In1)									
ref signal	1			16	2	DAC_0_8	reference voltage		{ifo}:PSL-ISS_SECONDLOOP_REF_SIGNAL
PD switch	1			16	2	DAC_0_9	in loop PD switch		{ifo}:PSL-ISS_SECONDLOOP_PD_SW
servo on/off	1			16	2	DAC_0_10	servo on/off		{ifo}:PSL-ISS_SECONDLOOP_SERVO_ON
gain	1			16	2	DAC_0_11	variable gain		{ifo}:PSL-ISS_SECONDLOOP_GAIN
DB9 Connector 3 (In2)									
boost on/off	1			16	2	DAC_0_12	boost on/off		{ifo}:PSL-ISS_SECONDLOOP_BOOST_ON
int on/off	1			16	2	DAC_0_13	integrator on/off		{ifo}:PSL-ISS_SECONDLOOP_INT_ON
spare	1			16	2	DAC_0_14			
spare	1			16	2	DAC_0_15			
A1.3 frequency stabilization FSS									
TTFSS fieldbox									
DB9 Connector (Out1)									
IN2					1	ADC_1_0	FSS loop errorpoint		{ifo}:PSL-FSS_MIXER
IN1					1	ADC_1_1	LEMO input IN1 at TTFSS fieldbox		{ifo}:PSL-FSS_IN1
FastM_OUT				16	1	ADC_1_2	monitor of NPRO PZT signal		{ifo}:PSL-FSS_FAST_MON
PCM_OUT				12	1	ADC_1_3	monitor of signal to phase correcting pockels cell		{ifo}:PSL-FSS_PC_MON
DB9 Connector (Out2)									
LOMOUT				12	1	ADC_1_4	strength of local oscilator signal		{ifo}:PSL-FSS_LO_POWER_MON
TEST2					1	ADC_1_5	LEMO input TEST2 at TTFSS fieldbox		{ifo}:PSL-FSS_TEST2_MON
RFPDDC				16	1	ADC_1_6	DC signal of photodiode in reflection of reference cavity		{ifo}:PSL-FSS_RFPD_DC
TPD				16	1	ADC_1_7	DC signal of photodiode in transmission of reference cavity		{ifo}:PSL-FSS_TPD_DC
DB9 Connector (In1)									
CGI				16	1	DAC_1_0	common gain		{ifo}:PSL-FSS_COMMON_GAIN
OSI				16	1	DAC_1_1	signal to be added into error point		{ifo}:PSL-FSS_MIXER_OFS
FGI				16	1	DAC_1_2	fast path gain (NPRO PZT)		{ifo}:PSL-FSS_FAST_GAIN
SLOWI				16	1	DAC_1_3	signal given to the SLOW BNC output of TTFSS (connected to RAMP IN)		{ifo}:PSL-FSS_FAST_RAMP_INJECTION
DB9 Connector (In2)									
TST1E					1	DAC_1_4	enables BNC TEST1 IN (summation at output of MIXER (at input of LP filter)		{ifo}:PSL-FSS_TEST1_ON
TST2E					1	DAC_1_5	enables BNC TEST2 IN (summation at error point, at output of MIXER LP filter)		{ifo}:PSL-FSS_TEST2_ON
RMPE					1	DAC_1_6	open/close control loop after error point and infront of ramp injection in fast path		{ifo}:PSL-FSS_LOOP_CLOSED
TEMP					1	DAC_1_7	signal to LEMO TEMP at TTFSS FB		{ifo}:PSL-FSS_NPRO_TEMP
VCO fieldbox	VCO at the sites communicates via Beckhoff)								
DB9 Connector (Out1)									
VCO_DETPWR					1	ADC_1_8	VCO power monitor		{ifo}:PSL-FSS_VCO_POWER_MON
					1	ADC_1_9			
					1	ADC_1_10			
					1	ADC_1_11			
DB9 Connector (In2)									
MODLEVEL					1	DAC_1_12	sets the level of the rf-signal send from the VCO to the FSS-AOM		{ifo}:PSL-FSS_VCO_MODLEVEL
TEST_SW					1	DAC_1_13	enables the TEST input (BNC at VCO box)		{ifo}:PSL-FSS_VCO_TEST_ON
WIDE_SW					1	DAC_1_14	enables the WIDE input (BNC at VCO box, wideband actuator signal from MC loop)		{ifo}:PSL-FSS_WIDE_ON
A1.4 diagnostic breadboard DBB									
DB25 Connector 1									
QPD1-QX	1				2	ADC_3_0	quadrant phtotodiode 1 dx -DC		{ifo}:PSL-DBB_QPD1_QX
QPD1-QY	1				2	ADC_3_1	quadrant phtotodiode 1 dy -DC		{ifo}:PSL-DBB_QPD1_QY
QPD1-QS	1				2	ADC_3_2	quadrant phtotodiode 1 sum -DC		{ifo}:PSL-DBB_QPD1_QS
QPD2-QX	1				2	ADC_0_3	quadrant phtotodiode 1 dx -DC		{ifo}:PSL-DBB_QPD2_QX
QPD2-QY	1				2	ADC_3_4	quadrant phtotodiode 1 dy -DC		{ifo}:PSL-DBB_QPD2_QY
QPD2-QS	1				2	ADC_3_5	quadrant phtotodiode 1 sum -DC		{ifo}:PSL-DBB_QPD2_QS
RIN-DC	1				2	ADC_3_6	power noise sensing photodiode DC		{ifo}:PSL-DBB_RPD_DC
TPD-0DB	1				2	ADC_3_7	photodiode in transmission of cavity (not amplified)		{ifo}:PSL-DBB_TPD_0DB
DB25 Connector 2									DB25 Connector 2
QPD1-DX	1				2	ADC_3_8	quadrant phtotodiode 1 dx - demodulated		{ifo}:PSL-DBB_QPD1_DX
QPD1-DY	1				2	ADC_3_9	quadrant phtotodiode 1 dy - demodulated		{ifo}:PSL-DBB_QPD1_DY
QPD-DS	1				2	ADC_3_10	quadrant phtotodiode 1 sum - demodulated		{ifo}:PSL-DBB_QPD_DS
QPD2-DX	1				2	ADC_0_11	quadrant phtotodiode 1 dx - demodulated		{ifo}:PSL-DBB_QPD2_DX
QPD2-DY	1				2	ADC_3_12	quadrant phtotodiode 1 dy - demodulated		{ifo}:PSL-DBB_QPD2_DY
PZTMON	1				2	ADC_3_13	actuator signal of locking loop with signal conditioning		{ifo}:PSL-DBB_PZTMON
HVMON	1				2	ADC_3_14	actuator signal of locking loop		{ifo}:PSL-DBB_HVMON
RPD_AC	1				2	ADC_3_15	power noise sensing photodiode AC		{ifo}:PSL-DBB_RPD_AC
DB25 Connector 3									DB25 Connector 3
TPD-40DB	1				2	ADC_3_16	photodiode in transmission of cavity (40dB gain output)		{ifo}:PSL-DBB_TPD_40DB
TPD-80DB	1				2	ADC_3_17	photodiode in transmission of cavity (80db gain output)		{ifo}:PSL-DBB_TPD_80DB
SHUTTER-REQ	1				2	ADC_3_18	close shutter request		{ifo}:PSL-DBB_SHUTTER_REQ
AUX-INPUT1	1				2	ADC_0_19			{ifo}:PSL-DBB_AUX_INPUT1
AUX-INPUT2	1				2	ADC_3_20			{ifo}:PSL-DBB_AUX_INPUT2
AUX-INPUT3	1				2	ADC_3_21			{ifo}:PSL-DBB_AUX_INPUT3
AUX-INPUT4	1				2	ADC_3_22			{ifo}:PSL-DBB_AUX_INPUT4
RMT-READBACK	1				2	ADC_3_23			{ifo}:PSL-DBB_RMT_READE
DB25 Connector 4									DB25 Connector 4
CTRL0	1				2	DAC_3_0	control signal length control		{ifo}:PSL-DBB_CTRL0
CTRL1X	1				2	DAC_3_1	control signal alignment control		{ifo}:PSL-DBB_CTRL1X
CTRL1Y	1				2	DAC_3_2	control signal alignment control		{ifo}:PSL-DBB_CTRL1Y
CTRL2X	1				2	DAC_0_3	control signal alignment control		{ifo}:PSL-DBB_CTRL2X
CTRL2Y	1				2	DAC_3_4	control signal alignment control		{ifo}:PSL-DBB_CTRL2Y
PHASE	1				2	DAC_3_5			{ifo}:PSL-DBB_PHASE
LENS1	1				2	DAC_3_6	actuates mode matching lens 1		{ifo}:PSL-DBB_LENS1
LENS2	1				2	DAC_3_7	actuates mode matching lens 2		{ifo}:PSL-DBB_LENS2
DB25 Connector 5									DB25 Connector 5
LENS-LATCH	1				2	DAC_3_8			{ifo}:PSL-DBB_LENS-LATCH
SHUTTER_DBB	1				2	DAC_3_9			{ifo}:PSL-DBB_SHUTTER_DBB
RMT	1				2	DAC_3_10			{ifo}:PSL-DBB_RMT
MODOFF	1				2	DAC_0_11			{ifo}:PSL-DBB_MODOFF
SCANMODE	1				2	DAC_3_12			{ifo}:PSL-DBB_SCANMODE
SHUTTER-MULTIPLEX	1				2	DAC_3_13			{ifo}:PSL-DBB_SHUTTER_MULTIPLEX
FILTER-SWITCH1	1				2	DAC_3_14			{ifo}:PSL-DBB_FILTER_SWITCH1
FILTER-SWITCH2	1				2	DAC_3_15			{ifo}:PSL-DBB_FILTER_SWITCH2
	injection locking is analog loop, lock acquisition is guided by Beckhoff (see A2.3), EPICS used for fast sensing and signal injection (via PMC RT-model)								
A1.5 injection locking ILS (EPICS part)									
DB9 Connector 4 (Out2)									
HV monitor	1			1	2	ADC_2_12	monitor of HV signal send to PZT actuator of ILS		{ifo}:PSL-ILS_HV_MON
Mixer out monitor	1			1	2	ADC_2_13	error signal of injection locking control loop		{ifo}:PSL-ILS_MIXER
Local oscillator power (LODET)	1			1	2	ADC_2_14	power of local oscillator used in demodulation electronic		{ifo}:PSL-ILS_LO_POWER_MON
"resonant" trigger (TRIGGER)	1			1	2	ADC_2_15	DC signal of locking diode, used by autolock to determine if HPL is resonant		{ifo}:PSL-ILS_TRIGGER
DB9 Connector 5 (Out1)									
TF B	1			16	2	ADC_2_8	test point for transfer function measurement		{ifo}:PSL-ILS_TF_B
Temp						ADC_2_9	temperature sensor on PMC		
TF A						ADC_2_10	test point for transferfunction measurement		{ifo}:PSL-ILS_TF_A
Resonant						ADC_2_11	binary signals, 1 if auto lock thinks PMC is resonant		{ifo}:PSL-ILS_RESONANT_ON
	module for HPL photodiodes, RT transferfunction measurements and channels missed in design								
A1.6 PSL monitoring Field Box									
DB9 Connector 1									
OSC photodiode - amplifier power in	1			16	2	ADC_2_16	monitoring photodiode in HPL: signal from front-end at output of Faraday Isolator		{ifo}:PSL-OSC_PDAMP_DC
OSC photodiode - reverse power (FI reflected	1			16	2	ADC_2_17	monitoring photodiode in HPL: power in reverse direction split of at FI		{ifo}:PSL-OSC_PDISO_DC
OSC photodiode - Brewster Plate reflected	1			16	2	ADC_2_18	monitoring photodiode in HPL: reflection at Brewster Plate in HPL oscillator		{ifo}:PSL-OSC_PDBP_DC
OSC photodiode - oscillator internal power	1			16	2	ADC_2_19	monitoring photodiode in HPL: circulating light power in HPL oscillator		{ifo}:PSL-OSC_PDINT_DC
DB9 Connector 2									
OSC photodiode - amplifier power in -AC	1			16	2	ADC_2_20	monitoring photodiode in HPL: signal from front-end at output of Faraday Isolator		{ifo}:PSL-OSC_PDAMP_AC
OSC photodiode - reverse power (FI reflected	1			16	2	ADC_2_21	monitoring photodiode in HPL: power in reverse direction split of at FI		{ifo}:PSL-OSC_PDISO_AC
OSC photodiode - Brewster Plate reflected -A	1			16	2	ADC_2_22	monitoring photodiode in HPL: reflection at Brewster Plate in HPL oscillator		{ifo}:PSL-OSC_PDBP_AC
OSC photodiode - oscillator internal power -A	1			16	2	ADC_2_23	monitoring photodiode in HPL: circulating light power in HPL oscillator		{ifo}:PSL-OSC_PDINT_AC
DB9 Connector 3									
PMC - reflected port power meter	1			16	2	ADC_2_24	power in reflection of PMC (power meter used for installation and maintenance)		{ifo}:PSL-PWR_PMC_REFL
PMC - transmitted port power meter (installati	1			16	2	ADC_2_25	power in transmission of PMC (power meter used for installation and maintenance)		{ifo}:PSL-PWR_PMC_TRANS
HPL-power monitoring diode - DC	1			16	2	ADC_2_26	monitor photodiode (PD001) at output of HPL, main HPL power monitor		{ifo}:PSL-PWR_HPL_DC
HPL-power monitoring diode - AC	1			16	2	ADC_2_27	monitor photodiode (PD001) at output of HPL, main HPL power monitor		{ifo}:PSL-PWR_HPL_AC
									{ifo}:PSL-PWR_PMC_SUM transmitted plus reflected power
DB9 Connector 4									
water flow sensor for power meters and beam	1			16	2	ADC_2_28	used to detect too low water flow through beam dumps and power meters		{ifo}:PSL-MIS_FLOW
NPRO RRO monintoring PD - DC	1			16	2	ADC_2_29	monitor photodiode at input of 35W amplifier: senses NPRO power		{ifo}:PSL-PWR_NPRO
NPRO RRO monintoring PD - RRO detect	1			16	2	ADC_2_30	binary signal for NPRO rf- power (in band around relaxation oscillation frequency)		{ifo}:PSL-MIS_NPRO_RRO
spare	1			16	2	ADC_2_31			{ifo}:PSL-MIS_SPARE
	module for auxiliary inputs and outputs								
A1.7 PSL input/output Field Box									
DB9 Connector 1 (Out1)									
ADC1	1			16	2	ADC_1_12			
ADC2	1			16	2	ADC_1_13			
ADC3	1			16	2	ADC_1_14			
ADC4	1			16	2	ADC_1_15			
DB9 Connector 2 (Out2)									
ADC5	1			16	2	ADC_1_16			
ADC6	1			16	2	ADC_1_17			
ADC7	1			16	2	ADC_1_18			
ADC8	1			16	2	ADC_1_19			
DB9 Connector 3 (In1)									
DAC1	1			16	2	DAC_1_16			
DAC2	1			16	2	DAC_1_17			
DAC3	1			16	2	DAC_1_18			
DAC4	1			16	2	DAC_1_19			
DB9 Connector 4 (In2)									
DAC5	1			16	2	DAC_2_12			
DAC6	1			16	2	DAC_2_13			
DAC7	1			16	2	DAC_2_14			
DAC8	1			16	2	DAC_2_15			
A2 / Beckhoff interface LVEA	for information on acquired channels available in EPICS see interface D1.1 in "Digital (D)" spreadsheet								
A2.0 / NPRO Diagnostic	for information on acquired channels available in EPICS see interface D1.1 in "Digital (D)" spreadsheet								
A2.1 / Frontend Control	for information on acquired channels available in EPICS see interface D1.1 in "Digital (D)" spreadsheet								
A2.2 / HPL Control	injection locking is analog loop, lock acquisition is guided by Beckhoff , EPICS used for fast sensing and test point injection (see A1.5)								
A2.3 / Injection locking (Beckhoff part)									
DB9 Connector 1	1	c / 24V		1					
Enable locking (lock on)	1	c / 24V		1					
Ramp on/off (ramp on)	1	c / 24V		1			high gain, only relevant for PMC locking, switches between full and reduced power mode		
sw1	1	c / 24V		1			enables summation of TEST2 input		
sw2									
DB9 Connector 2	1	c / -10 ..10V		16					
Set power threshold (ref)	1	c / -10 ..10V		16					
Set error point offset (in offset)	1	c / -10 ..10V		16					
Set gain									
Lemo 00	1	s / -10..10V		16					
PTZ voltage monitor									
Lemo 00 (prelim)	1	s / 5V		1					
Relock counter									
A3 / Beckhoff - Diodeboxes	for information on acquired channels available in EPICS see interface D1.1 in "Digital (D)" spreadsheet								
A3.0 / Laser Diode Box Front End	7			12			Set Temperature LD 1-4	rAmpDiodeTempSet[1-4]	
ST_LD0.1-4	7	s / PT1000	20 Hz	16			Input Temperature LD 1-4	rAmpDiodeTempAct[1-4]	
IT_LD0.1-4	7	c / 0-10V	20 Hz	12			Output Temperature to Pelt.Amp. LD 1-4	rAmpDiodeTempCtrl[1-4]	
OT_LD0.1-4	2	c		12			Set Current LD 1-2/3-4	rAmpDiodeCurrentSet[1-2]	
SC_LD0.1-2/3-4	2	s / PT1000		12			Input Current LD 1-2/3-4	rAmpDiodeCurrentAct[1-2]	
IC_LD0.1-2/3-4	2	c / 0-10V	20 Hz	12			Output Current to Diode Supply LD 1-2/3-4	rAmpDiodeCurrentCtrl[1-2]	
OC_LD0.1-2/3-4	2	s	20 Hz	12			Input, Modulation Voltage frontend LD1-4	rAmpModulationVoltage[1-2]	
IV_LD0.1-2/3-4	1	s / PT1000	20 Hz	16			Input Heatsink Temp frontend diode box	rAmpDBHeatsinkTempAct	
IT_DBHeasinkTemp	1	s	20 Hz	1			Input Diode TempGuard	bAmpTempGuard	
I_TempGuards	1	s	20 Hz	1			Input	bAmpDBInterlock	
I_DBInterlock	1	c	20 Hz	1			Output	bAmpEnablePowerSupplies	
O_PowerSuppliesFrontEnd	for information on acquired channels available in EPICS see interface D1.1 in "Digital (D)" spreadsheet								
A3.1 / Laser Diode Box 1	7			12			Set Temperature LD 1-7	rOscDiodeTempSet[1,1-7]	
Set temp DB1_LD1-7	7	s / PT1000	100 Hz	16			Input Temperature LD 1-7	rOscDiodeTempAct[1,1-7]	
Act temp DB1_LD 1-7	7	c / 0-10V	100 Hz	12			Output Temperature to Pelt.Amp. LD 1-7	rOscDiodeTempCtrl[1,1-7]	
Output TEC DB1_LD 1-7	1	c		12			Set Current LD 1-7	rOscDiodeCurrentSet[1]	
set current DB1	1		100 Hz	12			Input Current LD 1-7	rOscDiodeCurrentAct[1]	
act current DB1	1	c / 0-5V	100 Hz	12			Output Current from Diode Supply LD 1-7	rOscDiodeCurrentCtrl[1]	
Output current DB1	2	s / PT1000							
Act temp heatsink DB1_1-2	for information on acquired channels available in EPICS see interface D1.1 in "Digital (D)" spreadsheet								
A3.2 / Laser Diode Box 2	7						Set Temperature LD 8-14	rOscDiodeTempSet[2,1-7]	
Set temp_DB2_LD1-7	7	s / PT1000	100 Hz	16			Input Temperature LD 8-14	rOscDiodeTempAct[2,1-7]	
Act temp DB2_LD 2-8	7	c / 0-10V	100 Hz	12			Output Temperature to Pelt.Amp. LD 8-14	rOscDiodeTempCtrl[2,1-7]	
Output TEC DB2_LD 2-8	1	c					Set Current LD 8-14	rOscDiodeCurrentSet[2]	
set current DB2	1						Input Current LD 8-14	rOscDiodeCurrentAct[2]	
act current DB2	1	c / 0-5V	100 Hz				Output Current to Diode Supply LD 8-14	rOscDiodeCurrentCtrl[2]	
Output current DB2	2	s / PT1000							
Act temp heatsink DB2_1-2	for information on acquired channels available in EPICS see interface D1.1 in "Digital (D)" spreadsheet								
A3.3 / Laser Diode Box 3	7						Set Temperature LD 15-21	rOscDiodeTempSet[3,1-7]	
Set temp_DB3_LD1-7	7	s / PT1000	100 Hz	16			Input Temperature LD 15-21	rOscDiodeTempAct[3,1-7]	
Act temp DB3_LD 2-8	7	c / 0-10V	100 Hz	12			Output Temperature to Pelt.Amp. LD 15-21	rOscDiodeTempCtrl[3,1-7]	
Output TEC DB3_LD 2-8	1	c					Set Current LD 15-21	rOscDiodeCurrentSet[3]	
set current DB3	1						Input Current LD 15-21	rOscDiodeCurrentAct[3]	
act current DB3	1	c / 0-5V	100 Hz				Output Current to Diode Supply LD 15-21	rOscDiodeCurrentCtrl[3]	
Output current DB3	2	s / PT1000							
Act temp heatsink DB3_1-2	for information on acquired channels available in EPICS see interface D1.1 in "Digital (D)" spreadsheet								
A3.4 / Laser Diode Box 4	7						Set Temperature LD 22-28	rOscDiodeTempSet[4,1-7]	
Set temp_DB4_LD1-7	7	s / PT1000	100 Hz	16			Input Temperature LD 22-28	rOscDiodeTempAct[4,1-7]	
Act temp DB4_LD 2-8	7	c / 0-10V	100 Hz	12			Output Temperature to Pelt.Amp. LD 22-28	rOscDiodeTempCtrl[4,1-7]	
Output TEC DB4_LD 2-8	1	c					Set Current LD 22-28	rOscDiodeCurrentSet[4]	
set current DB4	1						Input Current LD 22-28	rOscDiodeCurrentAct[4]	
act current DB4	1	c / 0-5V	100 Hz				Output Current to Diode Supply LD 22-28	rOscDiodeCurrentCtrl[4]	
Output current DB4	2	s / PT1000							
Act temp heatsink DB4_1-2	see "Interlock (I) " spreadsheet								
A3.5 / Interlock Box									
A4 / Beckhoff - chiller	for information on acquired channels available in EPICS see interface D1.1 in "Digital (D)" spreadsheet								
A4.1 / Xtal chiller									
DB9 connector	1	s / 24V	1	1					
Xtal chiller pump status	1	c / relais contact	1	1					
Enable Xtal chiller									
DB9 connector		s / RS232	1						
Xtal chiller readout	for information on acquired channels available in EPICS see interface D1.1 in "Digital (D)" spreadsheet								
A4.1 / Diode chiller									
DB9 connector	1	c / relais contact	1	1					
Enable diode chiller									
DB9 connector		s / RS232	1						
diode chiller readout									
A5 / PSL EPICS in laser diode room	optional RT module for fast sensing, fast LD control and transferfunction measurements in laser diode room								
A5.1 RT control chassis #3									
DB9 Connector 1	1			16	3				
TPout 1	1			16	3				
TPout 2	1			16	3				
TPout 3	1			16	3				
TPout 4									
DB9 Connector 1	1			16	3				
TPin 1	1			16	3				
TPin 2	1			16	3				
TPin 3	1			16	3				
TPin 4									

To AA Ch. 1-8

Pins	Name	A/D ch.
1-14	QPD1-QX	0
2-15	QPD1-QY	1
3-16	QPD1-QS	2
4-17	QPD2-QX	3
5-18	QPD2-QY	4
6-19	QPD2-QS	5
7-20	RIN-DC	6
8-21	TPD-0DB	7

To AA Ch. 9-16

Pins	Name	A/D ch.
1-14	QPD1-DX	8
2-15	QPD1-DY	9
3-16	QPD-DS	10
4-17	QPD2-DX	11
5-18	QPD2-DY	12
6-19	PZTMON	13
7-20	HVMON	14
8-21	RINAC	15

To AA Ch. 17-24

Pins	Name	A/D ch.
1-14	TPD-40DB	16
2-15	TPD-80DB	17
3-16	SHUTTER-REQ	18
4-17	AUX-INPUT1	19
5-18	AUX-INPUT2	20
6-19	AUX-INPUT3	21
7-20	AUX-INPUT4	22
8-21	RMT-READBACK	23

To AI Ch. 1-8

Pins	Name	D/A ch.
1-14	CTRL0	0
2-15	CTRL1X	1
3-16	CTRL1Y	2
4-17	CTRL2X	3
5-18	CTRL2Y	4
6-19	PHASE	5
7-20	LENS1	6
8-21	LENS2	7

To AI Ch. 9-16

Pins	Name	D/A ch.
1-14	LENS-LATCH	8
2-15	SHUTTER-DBB	9
3-16	RMT	10
4-17	MODOFF	11
5-18	SCANMODE	12
6-19	SHUTTER-MULTIPLEX	13
7-20	FILTER-SWITCH1	14
8-21	FILTER-SWITCH2	15