

Physical Interfaces

6.1 Power Module, DC Power

The power module provides a -48 V DC supply.

6.1.1 Connectors

The -48 VDC supply input is provided via a 4 pin power connector (Molex Mini-fit 2x2); the pinouts are shown in <Xref_Color>Table 6-1.

Table 6-1 Pin Out -48 VDC

Pin	Signal
1	GND
2	0V
3	-48V (supply 1)
4	-48V (supply 2)

6.1.2 Parameters

The -48VDC input conforms to the specifications in <Xref_Color><Xref_Color>Table 6-2.

Table 6-2 Electrical Specifications at DC input

Parameter	Limit
Power dissipation	Less than 120W
Fuse	7A
Battery voltage range	-40,5 to -72V DC

6.2 Alarm Interface, FAN-ALARM

6.2.1 Description

The ONS 15305 provides facilities to report a minimum of four auxiliary alarm inputs for associated equipment, for example, a power unit failure battery condition and an open cabinet door. It also provides two dedicated alarm outputs. The alarm outputs are related to the unit alarm indicator and the traffic alarm indicator. The input alarms are reported to the management system and are activated by a closed or open loop condition between a pair of contacts.

Figure 6-1 Alarm Input and Output Overview



6.2.2 Connectors

The alarm interface uses a 9-pin DSUB type connector. <Xref_Color>Table 6-2 lists the pin outs.

Table 6-3 Pin Out Alarm Connector

Pin	Signal
1	GND
2	Alarm input 1
3	Alarm input 2
4	Alarm input 3
5	Alarm input 4
6	Alarm input return
7	Alarm output 1 (Unit)
8	Alarm output return
9	Alarm output 2 (Traffic)
Fuse	7A
Battery voltage range	-40,5 to -72V DC

6.2.3 Electrical Parameters Alarm Input

Table 6-4 Electrical Specification at Alarm Input

Parameter	Value
Nominal open contact voltage	5 V
Nominal closed contact current	1 mA
Max. closed contact resistance	0.5 k ohm
Min. open contact resistance	10 k ohm

6.2.4 Electrical Parameters Alarm Output

Table 6-5 Electrical Specification at Alarm Output

Parameter	Value
Maximum load bias referred to common return	+/-75V
Maximum load current	50mA
Common return to earth	+/-250V
Maximum contact resistance	50 ohm

6.3 Auxiliary Interface

6.3.1 Description

The ONS 15305 offers a proprietary auxiliary interface for termination of overhead bytes selected from the different STM-N interfaces. The auxiliary interface is located on the system controller module, SYSCONT-SD128-RJ45.

Each STM-N interface can be configured to terminate one of the following overhead bytes: E1, F1, or E2. The byte to be terminated is selected from the network management system together with a unique time slot number *n*, where *n* equals 1-15 or 17-31. The auxiliary interface is a framed E1 interface, according to ITU-T G.704, where time slot 1-15 and 17-31 can carry one overhead byte each, according to the configuration described above.

The interface is synchronous which means that the incoming STM-N need to be synchronized with the T0 reference clock in the ONS 15305 and the incoming framed E1 need to be synchronized with the outgoing framed E1. Bit slips will occur if one of the interfaces is free running.

6.3.2 Connector

The auxiliary interface has an RJ-45 connector; <Xref_Color>Table 6-6 lists the pin outs.

Table 6-6 Pin Out Auxiliary interface

Pin	Signal
1	AUX_DO+
2	AUX_DO-
3	GND
4	AUX_DI+
5	AUX_DI-
6	AUX_SHIELD
7	NC
8	NC

Note Pin 6 is always AC connected to ground. The outer screen is always direct connected to ground.

6.4 VT-100 Terminal Interface

6.4.1 Description

The ONS 15305 offers a VT-100 interface for connection of a CiscoEdgeCraft Terminal/CLI interface. The interface is running at a data rate of 19.200 baud and is located on the system controller module, SYSCONT-SD128-RJ45.

6.4.2 Connector

The RS232 interface for the ONS 15305 is provided via an RJ-45 connector; <Xref_Color>Table 6-7 lists the pinouts.

Table 6-7 Pin Out VT-100 Connector

Pin	Signal
1	GND
2	TxD
3	RxD
4	DB-TxD
5	GND
6	VT_CTS
7	DB_RxD
8	VT_RTS

Note Pins 4 and 7 are used only for debug purposes.

6.5 Synchronization Interface

6.5.1 Description

The interface is a 120 ohm 2048 kHz synchronization input and output port, with specifications according to ITU-T G.703; the interface is located on the System controller module, SYSCONT-SD128-RJ45.

6.5.2 Connectors

Input and output are provided on an 8-pin RJ-45 connector; <Xref_Color>Table 6-8 lists the pinouts.

Table 6-8 Pin Out Synchronization Port

Pin	Signal
1	Sync output +
2	Sync output --
3	GND
4	Sync input +
5	Sync input --
6	Screen, Note 1
7	NC
8	NC

Note Pin 6 is always AC connected to ground. The outer screen is always direct connected to ground.

6.5.3 Other Interfaces

Other interface descriptions are found in the chapters describing each service module.

6.5.4 Prot Interface

For future release.