NATO supplier code: 1583G

NATO IST RTG 095 LEADER

Research project with support of the Ministry of Industry and Trade

LMSB – 14.1
Ruggedized Switchboard

Description:

The LMSB-14.1 introduces a ruggedized PBX - switchboard designed for use in harsh environmental conditions. It offers VoIP (Voice over IP) services for IP phones connected to the internal switch data ports and analogue phone sets connected to FXS ports. The LMSB-14.1 can be connected to tactical network based on optical fibers cable via up-link port, which is equipped with HMA Expanded Beam connector.
The HMA Expanded Beam technology preserves all advantages of signal transmissions through optical lines in harsh environmental field conditions.

The LMSB-14.1 includes microprocessor board with PBX software. The PBX server is based on SIP standard (Session Initiation Protocol), which can handle more than 30 simultanously VoIP connections. There are two FXS cards on the microprocessor board for connection analog phone sets via connector on front panel in basic LMSB-14.1 configuration. The IP phones can be connected to 6 LAN ports, 4 of them are able to provide PoE 802.3af to connected devices. The others IP phones would be connected to switches used in overall LAN installation. The total number or phones in the PBX network is about 300.
The PBX board is connected to internal switch, fiber optic uplink port is used for integration into higher level communication network.

Power supplying of LMSB-14.1 can be ensured from any DC source 10 – 36 V. The LMSB-14.1 switchboard can be mounted into vehicle as well as deployed on stationary workstation.

LMSB-14.1 switchboard

Features:

Base Unit – standard configuration[1]:

- Robust compact design resistant to harsh environmental conditions and rough handling
- WAN interface:
  - 1x FO optical interface, either MM or SM
- LAN interface
  - 2x 1 Gpbs ports
  - 4x 100 Mbps ports with PoE 802.3af
- 2x FXS ports
- Console port
- Power supply 10 – 36 V DC

Extension Unit:

- 20x FXS ports

Note: 1) Please contact sales@optokon.com for other configuration

Functionality:

Web GUI allows settings of roles for individual and groups of users.
Phone service:

- Calls encryption by using TLS and SRTP protocol
- Call Recording
- Autoprovisioning, download of phone set configuration from TFTP server
- Call QUEUES
- Routing of calls
- Encrypted calls

Specifications:

Mechanical parameters:	
Temperature	Operating: -35 °C to +70 °C Storage: -40 °C to +85 °C
Environmental	Fulfils MIL-STD 810G
Mechanical	Fulfils MIL-STD 810G, IP 63 protection
Power supply: DC AC	10 – 36 V DC 110/230 V AC, on request
Dimensions (box)	430 x 260 x 65 mm (W x D x H)

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Optical Interface	Connector	2x HMA-J[2]
	Cable type	MM: 62.5/125 µm, 50/125 µm or SM: 9/125 µm
	Data rate	1000Base-FX
	Wavelength	MM: 1300 nm, SM: 1310, 1550 nm
LAN Interface	Connector	6x RJ-45
	Data rate	2x 10/100/1000Base-TX, 4x 10/100Base-TX
	Cable	10Base-T Cat. 3, 4, 5, UTP, 100/1000Base-TX Cat.5, 5e or higher
Console	Connector	1x RJ-45 – serial line
	Data rate	RS232 up to 256 kbps
Subscribers interface:	Subscriber lines	2x FXS or analog fax
	Number of channels	30 at once
	Conference call	Yes
	VoIP lines	Yes

Note: 2) HMA-J (Expanded Beam) standard, other on request

Ordering code:

LMSB-14.1 - XX - XX - YY - ZZ - FF - DC

FO - WAN uplink port

XX: Fiber optic
- **M5** MM 50/125 µm
- **M6** MM 62.5/125 µm
- **S3** SM 1310 nm

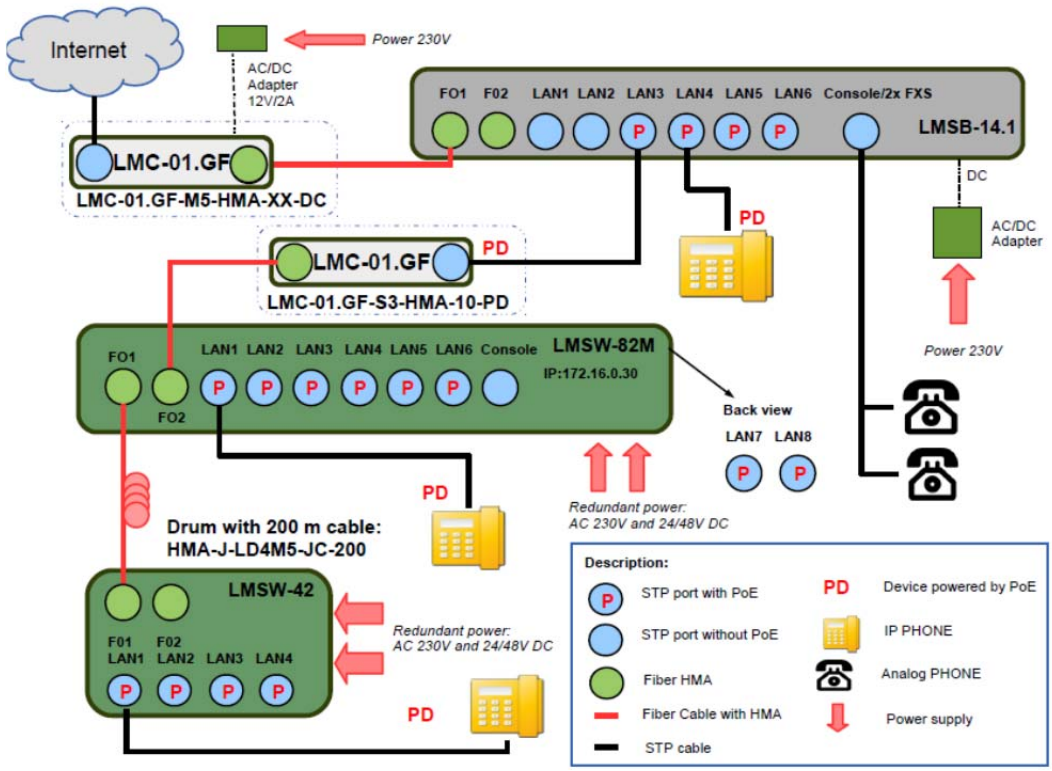
XX: Distance (FO)
- **XX**[3] Multimode
- **10** 10 km
- **30** 30 km

LAN interface
- **YY** 1 Gbps ports (1-5)
- **ZZ** 100 Mbps ports (1-4), PoE[4]
- **FF** FXS ports

Power supply[5]
- **DC**: 10-36 V DC

Note: 3) MM fiber – the distance depends on fiber type, up to 2 km.
SM fiber – other wavelength and distance on request
4) IEEE 802.3af, PoE (Power over Ethernet) – PSE, power supplying equipment
5) standard power supply: DC, please define if required different

LMSB-14.1 switchboard application diagram:



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