

## Certificate of Acceptance

PA05/06806

**Manufacturer:**  
Westermo

**Issue :** 2  
**Valid From :** 16/11/2021

## Westermo Optical SFPs

**Product Description**

A range of extended temperature optical SFP which may be installed in Westermo and non Westermo devices.

**Product Image****Scope of Acceptance****Full Acceptance**

- All SFP listed in this certificate may be used in Network Rail approved Westermo devices.
- For use with Cisco hosts, refer to NRT-TEFA-MAN-0016-1.2-6624386, “NRT Transceiver Compatibility Matrix” for details. Not all Cisco hosts and associated IOS releases have been proven.

**Note:**

Removed SFPs from PA05/05350 and included them in this certificate.

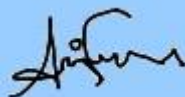
**Changes made in issue 2:**

Updated with direct replacements for End-of-Sale SFPs.

Network Rail Acceptance Panel (NRAP) hereby authorises the product above for use and trial use on railway infrastructure for which Network Rail is the Infrastructure Manager under the ROGS regulations.

Reviewed by:

Authorised by:



Aamir Malik  
Product Acceptance Coordinator



Fraser Allan  
Network Technical Head, Telecoms

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## Specific Conditions

The following Conditions are specific to the approved product/s contained within this Certificate. These conditions must be adhered to in addition to the Network Rail General Conditions contained within the "General Terms and Conditions" section. Failure to adhere to these conditions may result in the withdrawal or suspension of Acceptance of some, or all of the items contained within the accepted configuration.

**Manufacturer**

- 1) Contact Network Rail Technology Introduction group via [prodacc@networkrail.co.uk](mailto:prodacc@networkrail.co.uk) regarding any firmware and hardware changes. The emails shall include the certificate of acceptance number, the product involve and the changes.

**User**

- 1) Competent installers shall install in accordance with the equipment's instructions and any Network Rail supplementary instructions
- 2) It is project's responsibility to make sure the equipment can support the intended applications at the intended EMC environment. SFPs listed in this certificate are all EN50121-4 compliant.
- 3) It is project's responsibility to make sure that the SFPs are fully compatible with the intended host devices. Compatible implies enabling the host devices to deliver all the intended functions including reporting of alarms and events generated by the installed SFPs.

## Product Configuration

**Hardware (Maintenance Spares and Line Replaceable Units).**

Item	Part No.	Description	Catalogue No.
1	1100-0558	GSLC20-BiDi-A-DDM Gbit Single mode BiDi transceiver 20km,1310/1550nm, DDM -40 to +85°C (-40 to +185 °F)  <b>Item 1 and 2 are a working pair</b>	0087/000289
2	1100-0559	GSLC20-BiDi-B-DDM Gbit Single mode BiDi transceiver 20km,1550/1310nm, DDM -40 to +85°C (-40 to +185 °F)  <b>Item 1 and 2 are a working pair</b>	0087/000290
3	1100-0567	GSLC40-BiDi-A-DDM Gbit Single mode BiDi transceiver 40km, 1310/1490nm, DDM -40 to +85°C (-40 to +185 °F)  <b>Item 3 and 4 are a working pair</b>	0087/000291
4	1100-0568	GSLC40-BiDi-B-DDM Gbit Single mode BiDi transceiver 40km, 1490/1310nm, DDM -40 to +85°C (-40 to +185 °F)  <b>Item 3 and 4 are a working pair</b>	0087/000292

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Item	Part No.	Description	Catalogue No.
5	1100-0131	MM-LC2. 100Mbps. multimode mode (62 .5/125 & 50/125) at 1310 nm, LC connector, approx 2 km -40 to +85°C (-40 to +185 °F)  <b>This item is End-of-Sale. Use item 5A as direct replacement.</b>	0087/000293
5A	1100-0531	MLC2-DDM. 100Mbps. multimode mode (62 .5/125 & 50/125) at 1310 nm, LC connector, approx 2 km -40 to +85°C (-40 to +185 °F)	0087/001128
6	1100-0132	SM-LC20. 100Mbps. single mode (9/125) at 1310 nm, LC connector, approx 20 km -40 to +85°C (-40 to +185 °F)  <b>This item is End-of-Sale. Use item 6A as direct replacement.</b>	0087/000294
6A	1100-0532	SLC20-DDM. 100Mbps. single mode (9/125) at 1310 nm, LC connector, approx 20 km -40 to +85°C (-40 to +185 °F)	0087/001129
7	1100-0133	SM-LC40. 100Mbps. single mode (9/125) at 1310 nm, LC connector, approx 40 km -40 to +85°C (-40 to +185 °F)  <b>This item is End-of-Sale. Use item 7A as direct replacement.</b>	0087/000295
7A	1100-0533	SLC40-DDM. 100Mbps. single mode (9/125) at 1310 nm, LC connector, approx 40 km -40 to +85°C (-40 to +185 °F)	0087/001130

## Assessed Documentation

Reference	Title	Doc. Rev.	Date and Applies to Cert. issue No.	
---	Email from Phil Mounter to Alisdair Smith. Subject: DoC for Westermo.	---	04/07/17	T1
---	Email from Alisdair Smith to Tak Lam. Subject: Westermo SFP Testing.	---	16/08/17	T1
T08-0166	Quality organisation. File name: " PQQ-07-T08-0166 Quality organisation.doc"	C	09/10/14	T1
556361-2604	Declaration of conformity to REACH regulation. file name: " REACH DoC February 2016 update.pdf"	---	02/02/15	T1
556361-2604	Declaration of Conformity. File name: "Westermo DOC SFP.pdf"	---	11/04/16	T1
Transceivers 1Gbit_1611_EN_REV. D	Westermo Gigabit Transceivers data sheet. File name: "Westermo 1Gb fibre transceiver.pdf"	---	---	T1
TEL-T-0029-TL	Westermo SFPs in Cisco Hosts Stability Test	1	28/03/19	1
TEL-T-0032-TL	TEST REPORT Westermo DDM SFP compatibility testing	1	28/09/21	2
---	TEL-T-0032 DDWM SFP Compatibilty EXFO reports.  Test reports to support results in TEL-T-0032-TL	---	---	2
---	Westermo EU Declaration of Conformity	---	10/12/20	2

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Reference	Title	Doc. Rev.	Date and Applies to Cert. issue No.
--- ---	Westermo Product Office Statement #354	--- ---	23/09/21   2

## Certificate History

Issue	Date	Issue History
T1	29/08/2017	First issue for trial.
1	04/04/2019	First issue as full acceptance. Moved SFPs from PA05/05350 onto this certificate.
2	16/11/2021	Updated with direct replacements for End-of-Sale SFPs.

## Contact Details

**Manufacturer**

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Westermo

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## General Terms & Conditions

### 1) General

- 1) This certificate can only be amended by Network Rail Product Acceptance, the Professional Head or nominated delegate. Any alterations made by a other persons will invalidate the entire certificate.
- 2) Failure to abide by the requirements in this Certificate of Acceptance may invalidate the certificate, thereby restricting the right to operate the product and / or limiting the future supply and deployment of the product on the infrastructure.
- 3) Upon the review date this certificate and the product it relates to is invalid and not accepted for use. Manufacturers are to make an application for a review prior to the review date via the NR sponsoring applicant.

### 2) Manufacturer

The Manufacturer shall:

- 1) Ensure that all products supplied comply with the standards defined in the Acceptance Requirements or otherwise documented as part of the assessment, including meeting the reliability requirements included in the Network Rail Design for Reliability Standard (DFR) NR-L2-RSE-0005 and in any deed of warranty for the relevant certificate number.
- 2) Notify Network Rail Product Acceptance:
  - a. Within 48 hours, of any deficiencies affecting the quality, functionality or safety integrity of the product (including corrective action undertaken or proposed).
  - b. Of any intended change to the accepted product; changes include:
    - i. a change to the product configuration (to the actual product or its application);
    - ii. a variation to or addition of manufacturing locations or processes;
    - iii. a change in the name or ownership of the manufacturing company;
    - iv. any changes to the ability or intention to support with technical services, spares or repairs.
- 3) The Manufacturer shall provide Network Rail Product Acceptance or National Supply Chain (NSC) at least 12 (twelve) months notice of its intention to discontinue supply or to provide such notice as is reasonable if such discontinuance is outside its control and will offer the opportunity of a Last Time Buy to Network Rail together with date for last order placement and supply of the parts affected. The introduction of proposed alternative products shall be communicated to Network Rail Product Acceptance.
- 4) Provide further copies of operating and maintenance manuals to purchasers / users of the product as necessary (including certificates of conformance, calibration etc).
- 5) Provide further copies of training manuals and an appropriate level of training to purchasers or users of the product as necessary.
- 6) Where applicable, specialist technical support, repairs and servicing of the product shall be carried out by the Original Equipment Manufacturer (OEM) or authorised agent only.
- 7) Network Rail may request information from the manufacturer to prove product compliance with clauses 1 and 2 above and reserve the right to suspend and/or withdraw any application where information is not forthcoming within a reasonable timeframe.
- 8) In accordance with Network Rail's Quality Assurance Policy Statement, where the specification and/or Product Acceptance Certificates specify quality assurance classifications for the products, the manufacturer shall comply with the specified level of quality assurance for each product and allow Network Rail access to carry out its quality assurance checks.
- 9) The manufacturer shall give Network Rail's representatives access at all reasonable times to its premises and allow them to inspect its quality systems and production methods and, if requested, to inspect, examine and test the products both during and after their manufacture and the materials being used in their manufacture.

### 3) Conditions of Use

Specifiers, installers, operators, maintainers, etc. using the product shall:

- 1) Comply with the certificate conditions. If a condition is not understood guidance must be sought from Network Rail Product Acceptance.
- 2) Check that the application of use complies with the relevant certificate's scope of acceptance.
- 3) Report any defect if it is a design or manufacturing fault likely to affect performance and/or the safe operation of the railway in writing to Network Rail Product Acceptance.
- 4) Inform Network Rail Product Acceptance in writing of a change to the product configuration (or to the actual product or its application).
- 5) Operate, maintain and service the product in accordance with Network Rail standards and Operation and Maintenance manuals as appropriate.
- 6) Be appropriately trained and authorised for the installation, maintenance and use of the product.
- 7) Only send products for repair or reconditioning to the Original Equipment Manufacturer (OEM) or authorised agent.
- 8) Users are to be aware that Product Acceptance is not a substitute for design approval.

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#### 4) Compliance

Railways and Other Guided Systems (ROGS) Regulations

1) Where the product is to be used in areas where Network Rail is not the Infrastructure Manager (e.g. leased stations), the sponsor shall additionally obtain formal consent from the Infrastructure Manager for the locality where the equipment is to be installed. This may include a requirement for additional safety verification. The decision of that Infrastructure Manager is binding, and cannot be overridden by Network Rail except by the escalation processes established in the ROGS regulations

2) As required in Railway Group Standard RIS-8270-RST, at each use of this product the project or group responsible for installation and commissioning shall be required to demonstrate compatibility with:

- a. All rail vehicle types that have access rights over the area affected by the change
- b. Infrastructure managed by others
- c. Neighbours.

Railway Interoperability Regulations

3) For interoperable constituents of systems the project or group responsible for installation and commissioning shall be required to demonstrate compliance with the relevant Technical Specifications for Interoperability (TSI) where appropriate.

4) An authorisation from the national safety authority (i.e. the Railway Safety Directorate of the Office of Rail and Road) is required before the equipment is to be used in revenue earning service.

#### 5) Supply Chain Arrangements

1) Certificates of acceptance do not imply any particular quantity of supply nor any exclusivity of supply.

2) Products may be purchased by Network Rail or its agents, suppliers or contractors.

3) Manufacturers should note that it is not necessary to enter into any exclusive supply arrangements with resellers or other suppliers.