

Certificate of Acceptance

PA05/06806

Manufacturer:
Westermo

Issue: T4
Valid From: 06/12/2018
Monitoring Period: 31/08/2019

Optical SFPs

Product Description

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

Product Image



Scope of Acceptance

Trial Acceptance

Accepted for trial as part of:

- A21 West project.
- Highland Enhancement Programme

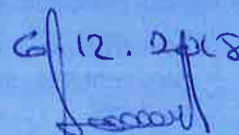
Network Rail Acceptance Panel (NRAP) hereby authorises the product above for use on railway infrastructure for which Network Rail is the Infrastructure Manager.

Reviewed by:



Usha Trivedi
Product Acceptance Coordinator

Authorised by:



Dan Mandoc
Professional Head of Telecoms

Please contact prodacc@networkrail.co.uk

Network Rail Infrastructure Ltd Registered Office 1 Eversholt St London NW1 2EE Registered in England and Wales No. 2904587 www.networkrail.co.uk
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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 Product Acceptance Team via 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.
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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.
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 alarms and events reporting regarding the installed SFPs.

Trial Criteria

1)	As Sponsor, Alisdair Smith, Project Engineer, is responsible for submitting a trial report to Product Acceptance Team via ProdAcc@networkrail.co.uk at least 1 month prior to the end of the Expiry Date at the top of this certificate.
2)	<p>Trial Report Requirements</p> <p>a) A signed, reviewed and dated trial report is required to include the following:</p> <ul style="list-style-type: none"> i. An introduction of what the trial report is about, results/observations against the trial requirements, start and end dates of the trial, and a conclusion of whether the trial was a success. ii. Provide a list detailing which SFP variant was installed in which host device. Where the SFP is installed in a plugin module which itself is installed into the host device; provide details of the plugin module. Also include details of the IOS used by the host devices. iii. Declaration of Conformity (DoC) from Westermo to confirm their range of extended temperature SFPs including the variants being trialled are compliant with EN 50121-4:2016.

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3)	<p>Trial Requirements</p> <ul style="list-style-type: none"> a) The absolute period where the performances of the SFPs are continually monitored shall be at least 4 months. b) The host devices where these SFPs are used shall be centrally remotely managed so that the SFPs' performances via the host devices can be monitored. <ul style="list-style-type: none"> i. Provide a log of all SFP related alarms and failures for all the host devices in the trial project for the entire trial period. ii. Annotate each SFP alarm and failure with the root cause and resolution. c) For each SFP variant installed in each host device type, include annotated screen shots from the hosts' central management system to demonstrate: <ul style="list-style-type: none"> i. each host type recognised each SFP variant and show the SFP variant in their inventory. ii. the hosts' management system can interrogate the SFP variants' DDM statistics. d) Provide a completed network commissioning document which demonstrates the functions/features required by the hosts are supported by each SFP variant.
4)	Where necessary the Independent Safety Assessor (ISA) shall review the report and make recommendations. The resulting ISA report (following the guidance in the Network Rail Engineering Safety Management publication) shall accompany the trial report.
5)	Failure to supply an adequate and timely report may delay achievement of full product acceptance and may result in the product under trial having to be removed and the infrastructure returned to an operational condition acceptable to Network Rail.

Product Configuration

Hardware (Maintenance Spares and Line Replaceable Units)

Item	Part No.	Description	Catalogue No.
1	1100-0558	GSLC20-BiDi-A-DDM Gbit Singlemode BiDi transceiver 20km,1310/1550nm, DDM <i>Item 1 and 2 are a working pair</i>	Not applicable during trial
2	1100-0559	GSLC20-BiDi-B-DDM Gbit Singlemode BiDi transceiver 20km,1550/1310nm, DDM <i>Item 1 and 2 are a working pair</i>	Not applicable during trial
3	1100-0567	GSLC40-BiDi-A-DDM Gbit Singlemode BiDi transceiver 40km, 1310/1490nm, DDM <i>Item 3 and 4 are a working pair</i>	Not applicable during trial
4	1100-0568	GSLC40-BiDi-B-DDM Gbit Singlemode BiDi transceiver 40km, 1490/1310nm, DDM <i>Item 3 and 4 are a working pair</i>	Not applicable during trial

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Assessed Documentation

Reference	Title	Doc. Rev.	Date and Applies to Cert. issue No.	
---	Email from Phil Mounter to Alisdair Smith. Subject: DoC for Westermo.	---	04/07/2017	T1
---	Email from Alisdair Smith to Tak Lam. Subject: Westermo SFP Testing.	---	16/08/2017	T1
T08-0166	Quality organisation. File name: " PQQ-07-T08-0166 Quality organisation.doc"	C	09/10/2014	T1
556361-2604	Declaration of conformity to REACH regulation. file name: " REACH DoC February 2016 update.pdf"	---	02/02/2015	T1
556361-2604	Declaration of Conformity. File name: "Westermo DOC SFP.pdf"	---	11/04/2016	T1
Transceivers 1Gbit_1611_E N_REV. D	Westermo Gigabit Transceivers data sheet. File name: "Westermo 1Gb fibre transceiver.pdf"	---	---	T1

Certificate History

Issue	Date	Issue History
T1	29/08/2017	First issue for trial
T2	26/04/2018	Trial extended to allow commissioning and the production of a sufficient trial report.
T3	15/08/2018	Trial extended to allow commissioning and the production of a sufficient trial report.
T4	06/12/2018	Trial extended to allow more stability performance and include trial for Highland Enhancement Programme.

Contact Details

Manufacturer

Westermo
Phil Mounter
pmounter@westermo.co.uk

Sponsor

Network Rail
Alisdair Smith
Alisdair.Smith@networkrail.co.uk

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General Terms & Conditions

1) General

- 1) This certificate can only be amended by Network Rail Technology Introduction Group. Any alterations made by a different person 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.

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 Acceptance Requirements and in any deed of warranty for the relevant certificate number.
- 2) Notify Network Rail Technology Introduction Group:
 - 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 Technology Introduction Group 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 the Network Rail Technology Introduction Group.
- 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 2011, where the specification and/or Product Acceptance Certificates specify quality assurance classifications (QA1 to QA5) 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 Technology Introduction Group.
- 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 Technology Introduction Group.
- 4) Inform Network Rail Technology Introduction Group 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 GE/RT8270, 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 Regulation) 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.