COM Carrier System - Project Timeline



PROJECT EXAMPLE

FOR THE "TRAIN ONBOARD UNIT FOR MOBILE COMMUNICATION SYSTEM". THE FOLLOWING REQUIREMENTS HAVE BEEN DEFINED:

Processor architecture ARM architecture

environmental parameters Cooling requirements Fanless

Interfaces and -2x miniPCle interfaces | Connected SIM card holder | communication module -2x ETH, 1xUSB, 1x RS232

Environment and Temperature range of -40°C to + 85°C

Power requirements Modular Power Module for the complete voltage range of railway technology (+ 24V DC to 110VDC)

Expected lifetime > 10 years



PHONE CALL (FIRST REQUIREMENT) AND CUSTOMER VISIT (PRODUCT MANAGER AND ENGINEERING)

A customer stated a problem for a "Train onboard unit for mobile communication system" and mentioned their inability to find the right solution on the market and the need for a customer-specific solution. Customer agreed to send nVent their specification documentation, to be evaluated by our Field Application Engineer.

CREATING SPECIFICATION WITH OUR FIELD APPLICATION ENGINEERS AND BLOCK DIAGRAM OF THE ARCHITECTURE.

The "Train onboard unit for mobile communication system" requirements regarding processor architecture, interface and communication modules, environment and environmental parameters, cooling and power requirements as well as expected lifetime is defined.

INQUIRY, QUOTATION AND ORDER

DESIGN **ADJUSTMENT** (1-3 months)

CUSTOMER-SPECIFIC LAYOUT, SIMULATIONS AND DETAILED SOLUTION

After ordering, the project manager realizes the specification, whereby the customer-specific layout is created and critical signal paths are simulated. Subsequently, the detail solution is discussed again with the customer.

PRODUCTION AND QUALITY MANAGEMENT

After agreeing on the detailed layout, we start with the production of the carrier board and the mechanical components.





TESTING, DESIGN VERIFICATION AND DELIVERY

The testing and verification of interfaces are conducted according to the specification. Example prototype DVT testing: Vibration test, EMV test, function test over the entire temperature range, BIOS adaptions for interfaces. All results are presented to the customer and the series test will be defined.

ELECTRONIC COMPONENT - END OF LIFE, ELECTRONIC WASTE / DISPOSAL AND ADDITIONAL CERTIFICATIONS

After delivery, we will monitor end of life components and will present our customers alternative solutions in advanced. Also, we will guarantee availability and storage of components. Furthermore, we take care of parts of the certification process (CE, UL, RED, etc.)

