

# MobilePHY/STACK

## DATASHEET

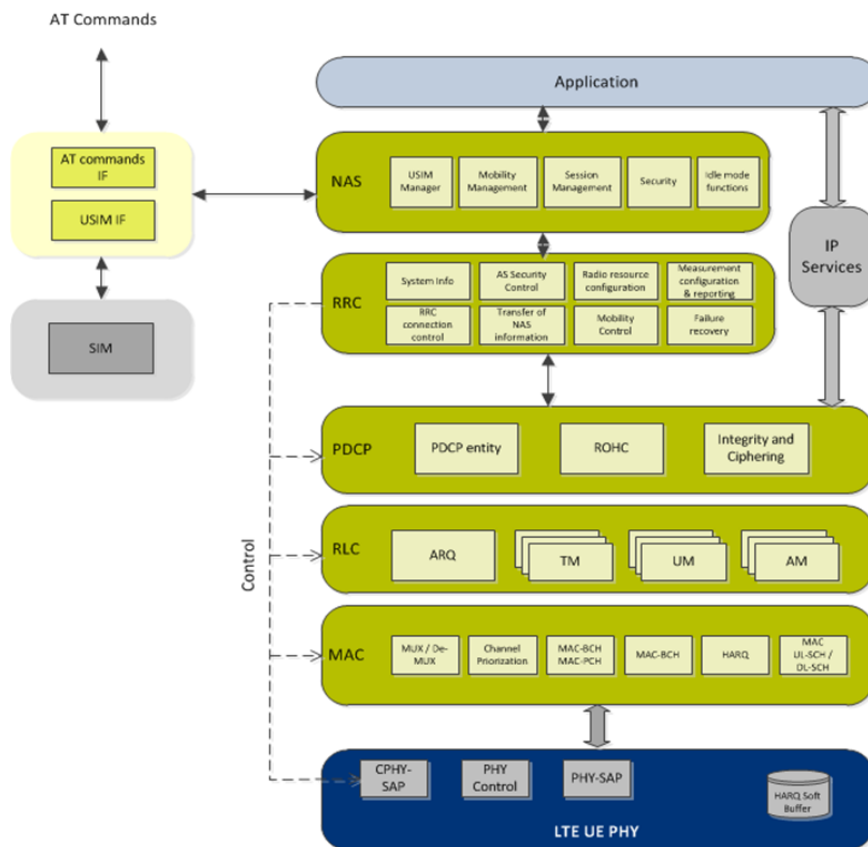
LTE Releases 8 and 9

Highly customizable for adding customer-specific features, even for low volumes

Can be optimised for low memory, processing power and power consumption

MobileSTACK pre-integrated on MobilePHY-TI

MobileSTACK portable to most any SoC/RTOS



**3GPP UE Rel. 9 PHY & Protocol Stack**

CommAgility MobilePHY and MobileSTACK are LTE PHY and Stack software for UE (User Equipment) on SDR, DSP and ASIC platforms

CommAgility's mobile software products comprise a complete Layers 1-3 solution for LTE UE product developers.

- MobilePHY-RefChain is an ANSI-C, non-real time implementation of a complete LTE UE physical layer, ready to be adapted to a customer's silicon architecture.
- MobilePHY-TI is based on the RefChain product and is an adaptation for Texas Instruments' TCI6614 and TCI6636/8 SoCs.
- MobileSTACK is a platform and OS independent implementation of the LTE UE layers 2 & 3. It is available integrated with MobilePHY-TI or can be integrated with third party physical layer software on other SoCs.

All products are based on a modular architecture and flexible interfaces to enable fast migration and easy adaptation to the customer architecture.

Since the LTE standard is defined for a large range of system capabilities, the software has been made highly configurable. This enables tailoring of the required features and efficient utilization of the available hardware resources, as well as reduction of the required resources, which minimises the bill of materials for the end device.

The software is compliant with 3GPP Releases 8 and 9 and supports the most useful features. The design benefits from the strong experience of CommAgility in high performance algorithms for multi-antenna systems, enabling efficient spectrum usage and maximal data throughput within the system.

All user equipment categories are supported. This means among other features, 64QAM modulation at highest data rates, and all MIMO modes such as SISO, SM, and SFBC.

CommAgility Ltd  
 sales@commagility.com  
 www.commagility.com  
 Tel: +44 1509 228866



## KEY FEATURES

- MobilePHY RefChain: Releases 8 and 9 FDD and TDD fully compliant LTE PHY as a generic C code reference chain
- MobilePHY-TI implements the reference chain on Texas Instruments' wireless SoCs (TCI6614, TCI6630, TCI6636)
- MobileSTACK: a portable LTE Releases 8 and 9 Protocol Stack
- Entirely software defined
- Innovative algorithms such as advanced MIMO detectors
- Comprehensive and configurable debug infrastructure
- Pre-certified through leading test partners

## RESULTING BENEFITS

- ⇒ Shortens development time of the LTE UE physical layer on customer silicon devices, and end products that work with all 3GPP compliant commercial terminals
- ⇒ Highly customizable for adding customer-specific features, even for low volumes
- ⇒ Supports most any SoC/RTOS, pre-integrated on MobilePHY-TI
- ⇒ Delivers complete flexibility and scalability
- ⇒ Proprietary algorithms provide optimised performance on TI architectures
- ⇒ Fast tracing supports time-critical modules
- ⇒ Reduces risk and cuts development time

## SPECIFICATIONS: 3GPP COMPLIANCE

- TS36 211 Physical Channels and Modulation v9.1.0
- TS36 212 Multiplexing and Channel Coding v9.4.0
- TS36 213 Physical Layer Procedures v9.3.0
- TS36 214 Physical Layer Measurements RSRP and RSRQ v9.2.0

Full feature set available on request



CommAgility Ltd, Loughborough, UK  
Tel: +44 1509 228866  
World-wide support details:

sales@commagility.com  
www.commagility.com

# MobilePHY/STACK

### OEM PARTNERSHIP SERVICES:

**IN DEVELOPMENT:**  
Support and training;  
hardware customisation;  
software and FPGA development.

**IN PRODUCTION:**  
lead-time reduction;  
extended warranty;  
and repair; quick turn repairs and/or spares stocking.

**EXTENDED LIFE:**  
obsolescence management;  
guaranteed lifecycle; Escrow.

**LICENSING** can be offered for high volume projects.