

# Do we need more than just taxonomy?

**Our aspiration is to create a system that helps the Arm eco system to share, update, and manage software (DIAM)**  
 Rastermaß, Kompatibilität

Considerations are:

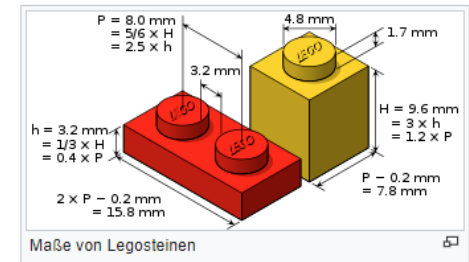
- Interface definitions
- Unified packs for essentials (FreeRTOS, lwIP, FileSystem, ...)
- Structured ways to add 3rd party software
- Data sheets for software packs
- Better search capabilities (taxonomy)

Maß	Lego („System“)	Duplo	Quatro	Primo
Breite (Raster)	8 mm	16 mm	32 mm	48 mm
Breite (1x1-Baustein)	7,8 mm	15,6 mm	31,2 mm	46,8 mm
Höhe (Bausteinhöhe)	9,6 mm	19,1 mm	?	38,3 mm (davon 5 mm Röhrenüberstand unten)
Plattenhöhe (relativ)	1/3	1/2	1/3	

Das Rastermaß spiegelt die Vergrößerung eines Bauwerks durch Anfügen eines Steins wider; an einem Stein ist es der von Noppenmitte zu Noppenmitte messbare Abstand.

	Lego	Duplo	Quatro	Primo
Lego		sitzt auch auf Lego-Noppen		
Duplo	2x2-Steine und deren Vielfache passen auf Duplo-Noppen		passt	passt mit seiner unten vorstehenden Zylinderhülse klemmend über 4 Duplo-Noppen. Weil der Korpus weniger weit nach unten reicht, bleibt der einfache Primostein auf 4 Duplonoppen (genauso wie auf einer Primonoppe) trotz Nachbarnoppen frei drehbar.
Quatro		passt		
Primo				

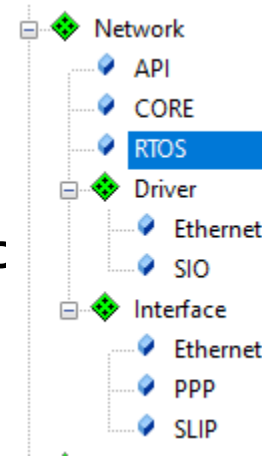
Source: <https://de.wikipedia.org/wiki/Lego>



**We need ways to educate industry and improve quality so that packs from different vendors fit together**

# Pack Datasheet: github.com/Open-CMSIS-

- **Pack/lwIP**  
Generated “Pack Datasheet” based on \*.PDSC XML data
- Possible “datasheet” content based on F file
  - Pack
  - Link to documentation
  - License
  - Keywords (for search)
  - Components
  - External dependencies (required components)
  - Exposed header files (API)
  - Configuration files, user code template files, examples
  - Release history
- Not directly possible (based on PDSC file) but potential useful
  - Mandatory components (that a user must select)
  - Provided interfaces (i.e. BSD socket)
    - Maybe exposed header files is sufficient?
  - [Overview diagram](#) (could be part of documentation)
  - Related components (i.e. Crypto, IoT socket, Cloud stacks, RTOS kernels)
    - Maybe by listing packs that require components from this pack



<input type="checkbox"/>	lwIP	2.2.0	<a href="#">lwIP (Lightweight IP stack)</a>
<input type="checkbox"/>		2.2.0	Network high-level wrapper API
<input type="checkbox"/>	IPv4/IPv6	2.2.0	Network Core (IPv4/IPv6)
<input type="checkbox"/>	CMSIS-RTOS2	2.2.0	OS abstraction layer (CMSIS-RTOS2)
<input type="checkbox"/>	CMSIS Driver	2.2.0	Ethernet Interface using CMSIS Ethernet Driver
<input type="checkbox"/>	CMSIS Driver	2.2.0	Serial I/O Interface using CMSIS USART Driver
			Connection Mechanism
<input type="checkbox"/>		2.2.0	Network Ethernet Interface
<input type="checkbox"/>		2.2.0	Network PPP over Serial Interface
<input type="checkbox"/>		2.2.0	Network SLIP Interface

## Pack cross reference

### Used by:

- pack: MDK-Packs::IoT\_Socket

**lwIP::lwIP**

### uses:

- component: CMSIS:RTOS2  
- component: RTOS&FreeRTOS:Core  
- component: CMSIS Driver:Ethernet  
- component: CMSIS Driver:Ethernet MAC  
- component: CMSIS Driver:Ethernet PHY  
- component: CMSIS Driver:USART

Pack Datasheet example \*needs more work\*: <https://github.com/ReinhardKeil/lwIP/tree/patch-1>